

Audit Report



APPLICATION CONTROLS OVER THE RETIREE AND CASUALTY
PAY SUBSYSTEM AT THE DEFENSE FINANCE AND
ACCOUNTING SERVICE CLEVELAND CENTER

Report No. 99-083

February 23, 1999

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Acronyms

DFAS	Defense Finance and Accounting Service
DISA	Defense Information Systems Agency
DRAS	Defense Retiree and Annuitant Pay System
OMB	Office of Management and Budget



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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February 23, 1999

MEMORANDUM FOR DIRECTOR, DEFENSE FINANCE AND ACCOUNTING
SERVICE

SUBJECT: Audit Report on Application Controls Over the Retiree and Casualty Pay
Subsystem at the Defense Finance and Accounting Service Cleveland Center
(Report No. 99-083)

We are providing this report for review and comment. The audit was conducted in support of our financial statement audits required by the Chief Financial Officers Act of 1990 and the Federal Financial Management Act of 1994. This report is the first of two reports that will be issued on the Defense Retiree and Annuitant Pay System. This report addresses our audit of the application controls over the Defense Finance and Accounting Service's Retiree and Casualty Pay Subsystem, one of two subsystems in the Defense Retiree and Annuitant Pay System. A separate report will address our audit of application controls over the Defense Finance and Accounting Service Annuitant Pay Subsystem.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Management did not provide comments on the draft report. Therefore, we request that comments on all recommendations be provided by March 23, 1999.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Ms. Kimberley A. Caprio at (703) 604-9139 (DSN 664-9139), e-mail KCaprio@dodig.osd.mil, or Mr. Dennis L. Conway at (703) 604-9158 (DSN 664-9158), e-mail DConway@dodig.osd.mil. See Appendix E for the report distribution. Audit team members are listed inside the back cover.

A handwritten signature in black ink, reading "Robert J. Lieberman", is positioned above the typed name.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 99-083
(Project No. 8FG-5010.00)

February 23, 1999

Application Controls Over the Retiree and Casualty Pay Subsystem at the Defense Finance and Accounting Service Cleveland Center

Executive Summary

Introduction. This report is the first of two reports resulting from our audit of application controls for the Defense Retiree and Annuitant Pay System. This report addresses our audit of the application controls over the Defense Finance and Accounting Service Cleveland Center's Retiree and Casualty Pay Subsystem (the Subsystem), one of two subsystems in the Defense Retiree and Annuitant Pay System. A separate report will address our audit of application controls over the Defense Finance and Accounting Service Annuitant Pay Subsystem. The Defense Finance and Accounting Service (DFAS) requested that we issue separate reports on these subsystems.

The Subsystem accounted for 1.8 million retirees and disbursed an average of \$2.4 billion per month from the DoD Military Retirement Trust Fund (the Fund) in FY 1998. Because of the high volume and dollar value of the transactions, effective controls over the Subsystem are essential to ensuring authorized, accurate, complete, and reliable retired pay data for the Fund.

Objectives. The overall audit objective was to evaluate general and application controls over the Defense Retiree and Annuitant Pay System to ensure the production of authorized, accurate, complete, and reliable data. This report addresses our review of selected application controls over the Subsystem. (Application controls are the policies and procedures that, when implemented, provide assurance that transactions are valid, properly authorized, and completely and accurately processed.) Also, we reviewed the management control program for the Retiree and Casualty Pay Subsystem.

Results. The DFAS Cleveland Center did not fully implement or maintain controls over the accuracy of information in the Retiree and Casualty Pay Subsystem. Although this audit did not detect unauthorized or fraudulent activity, implementation of these controls will increase managers' confidence that data in the Subsystem are accurate and authorized. See the Finding for a discussion of the audit results.

The DFAS Cleveland Center had implemented controls to assure that data were complete and reliable. However, the additional management controls recommended in this report will better assure DFAS that erroneous or rejected data can be detected in a timely manner to prevent or correct misstatements in the financial statements of the Fund. See Appendix A for details on the management control program.

Summary of Recommendations We recommend that the Director, DFAS Cleveland Center, develop new review procedures where necessary; enforce existing review procedures; document and maintain an audit trail of corrective actions; and update standard operating procedures to reflect the current state of operations for the Subsystem.

Management Comments. The Director, Defense Finance and Accounting Service did not comment on the draft report, issued on November 20, 1998. Therefore, we request that management provide comments on this final report by March 23, 1999.

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Background

This report is the first of two reports resulting from our ongoing audit of the application controls for the Defense Retiree and Annuitant Pay System. The audit was conducted to support our audits required by the Chief Financial Officers Act of 1990 and the Federal Financial Management Act of 1994. A separate report will address our audit of the application controls over the Defense Finance and Accounting Service Annuitant Pay Subsystem. The Defense Finance and Accounting Service (DFAS) requested that we issue separate reports on these subsystems.

On August 8, 1991, the DoD Corporate Information Management Financial Management Steering Committee approved the DFAS proposal to standardize and consolidate DoD retiree and annuitant pay systems. The DFAS Cleveland Center's Retired Pay System and the DFAS Denver Center's Annuitant Pay System were integrated as the Defense Retiree and Annuitant Pay System (DRAS). The DFAS Cleveland Center's Retired Pay System was renamed the Retiree and Casualty Pay Subsystem, and the DFAS Denver Center's Annuitant Pay System was renamed the Annuitant Pay Subsystem.

Retiree and annuitant pay transactions are processed on computers managed by the Defense Information Systems Agency (DISA). The DISA Defense Megacenter, Chambersburg, Pennsylvania, processes transactions for the DFAS Cleveland Center's Retiree and Casualty Pay Subsystem. The Defense Megacenter, Denver, Colorado, processes transactions for the DFAS Denver Center's Annuitant Pay Subsystem.

This report discusses our review of selected application controls over the DFAS Cleveland Center's Retiree and Casualty Pay Subsystem (the Subsystem). Application controls are the policies and procedures that, when implemented, provide assurance that transactions are valid, properly authorized, and completely and accurately processed. The Subsystem was used to account for 1.8 million retirees and to disburse a monthly average of \$2.4 billion from the DoD Military Retirement Trust Fund in FY 1998.

Objectives

The overall objective was to evaluate general and application controls over DRAS to ensure authorized, accurate, complete, and reliable data. This report addresses our review of selected application controls over the Subsystem. We also reviewed the management control program for the Retiree and Casualty Pay Subsystem.

See Appendix A for a discussion of the audit scope and methodology, and Appendix B for a summary of prior coverage related to the audit objectives.

Accuracy of Information in the Retiree and Casualty Pay Subsystem

The DFAS Cleveland Center did not fully implement or maintain controls over the accuracy of information in the Subsystem. Specifically, DFAS Cleveland Center personnel did not always:

- review reports that contained rejected or potentially erroneous data and take corrective actions to increase the accuracy of the retired pay records, and
- update standard operating procedures to ensure that retired pay employees understand their duties and enter only authorized information into the retired pay records.

Controls were not fully implemented or maintained because DFAS Cleveland Center managers did not always develop or enforce policies for reviewing reports that contained errors and rejected transactions, and did not consistently update operating procedures. Without adequate standard operating procedures, the retired pay employees could not ensure that data entered into the subsystem were correct. Further, if controls are not maintained over error and rejection reports and standard operating procedures, there is increased risk that erroneous or fraudulent transactions may not be detected in a timely manner to prevent or correct misstatements in retired pay records or the financial statements of the Military Retirement Trust Fund.

Guidance for Internal Control Systems

Office of Management and Budget (OMB) Circular No. A-127, "Financial Management Systems," June 23, 1993, states that financial management systems shall include a system of internal controls to ensure that reliable data are obtained, maintained, and disclosed in reports.

OMB Circular No. A-127 also states that agencies shall apply appropriate internal controls to all system inputs, processing, and outputs in accordance with OMB Circular No. A-123, "Management Accountability and Control," June 21, 1995. OMB Circular No. A-123 requires management controls to include assurances that revenues and expenditures are properly recorded and accounted for, and that reliable and timely information is collected and properly maintained.

To implement adequate management controls, DoD should ensure that minimum controls exist in an application system. (An application system is typically a group of computer programs that process information for a specific function such as retired payroll.) Application controls are the policies and procedures that, when

implemented, provide assurance that transactions are valid, properly authorized, and completely and accurately processed. The four major categories of application controls are:

- authorization controls,
- completeness controls,
- accuracy controls, and
- controls over integrity of processing and data files.

See Appendix D for a definition of the major categories of application controls.

Controls Over Accuracy of Retired Payments

DFAS had implemented controls to ensure that data were complete and reliable. However, the DFAS Cleveland Center did not fully implement or maintain controls over the accuracy of retiree information in the Subsystem. Specifically, the DFAS Cleveland Center needs additional controls over reviewing reports containing rejected and erroneous transactions, and over the updating of standard operating procedures to reflect current operations.

Monitoring and Correcting Errors and Rejections in Retired Pay Reports. DFAS Cleveland Center personnel were not fully monitoring and correcting errors and rejections shown in retired pay reports. The DFAS Cleveland Center produced a total of 410 daily, monthly, quarterly, and annual management reports that included error and rejection reports. We judgmentally selected eight error and rejection reports that could have the most significant impact on the reliability of the financial statements and the Subsystem if information was inaccurate or incomplete. These reports were critical controls for reducing the risk of unauthorized or fraudulent activity because they identified discrepancies in the retiree pay records.

We concluded that DFAS Cleveland Center personnel did not adequately review the eight error and rejection reports because:

- over 35 percent of the transactions on two of eight error and rejection reports lacked documentation to show that supervisors performed the reviews required by management;
- retired pay personnel did not review three of eight error and rejection reports to ensure that account information and payments were correct; or
- documentation was not retained or annotated for three of eight reports to establish a historical record of changes made to retiree pay accounts; therefore, an audit trail was lacking.

Management Policy for Reviewing Reports. Managers at the DFAS Cleveland Center stated that supervisors should review each retiree pay account on both the "Deleted Masters Report" and the "Computed Exception Report" to ensure that the accounts were properly deleted or established. The 2 reports analyzed during this audit contained 713 accounts; no documentation was available to verify that 250 (35.1 percent) of the accounts were reviewed according to management policy.

- The purpose of the "Deleted Masters Report" was to identify retiree accounts that were deleted from the Subsystem. Management required that supervisors review every transaction on this report to ensure that the accounts were deleted for the appropriate reasons. We were unable to verify that 223 (34.5 percent) of 646 retiree accounts were properly reviewed.
- The "Computed Exception Report" included retiree pay accounts adjusted by retired pay personnel at the DFAS Cleveland Center, using abnormal procedures that allowed them to override existing controls. According to the DFAS Cleveland Center's standard operating procedure, dated August 12, 1996, supervisors must review this report within 5 working days after it is produced. The "Computed Exception Reports" we reviewed were not marked to show that 26 (38.8 percent) out of 67 retiree accounts were reviewed. Review of the accounts on this report was critical because some DFAS retired pay employees had the ability to create accounts without supporting documentation or authorization.

Frequency of Reviews on Reports. We identified three reports that had no evidence of reviews performed by the DFAS Cleveland Center. Although the "Retired Payment File - Summary - Daily - Checks Report," the "Retired Payment File - Listing - Daily - Checks Report," and the "Defense Joint Military Pay System Non-Match Report" were frequently produced at the DFAS Cleveland Center, management did not require reviews on the pay accounts in these reports.

- The "Retired Payment File - Summary - Daily - Checks Report" and the "Retired Payment File - Listing - Daily - Checks Report" contained payments for new retirees. These payments were computed for a partial month when a new account had existed less than 1 month. DFAS Cleveland Center supervisors did not routinely review the reports because they believed that sufficient controls were in place to identify any discrepancies in the daily payments. However, management acknowledged the usefulness of these reports for reconciling imbalances between the total disbursements made to retirees and the amounts of disbursements recorded in the retired pay file. Therefore, these reports should be produced, reviewed, and stored in files to document the reconciliation of differences between actual payments and the accounting record (the retired pay file).

Also, a standard operating procedure was needed for the "Retired Payment File - Summary - Daily - Checks Report" and the "Retired

Payment File - Listing - Daily - Checks Report." Development of these standard operating procedures will provide greater assurance that pay technicians have guidance reflecting the procedures for reviewing, correcting, and documenting discrepancies between payments and accounting records.

- The "Defense Joint Military Pay System Non-Match Report" identified retirees that were recorded in the Subsystem, but were not recorded in the Defense Joint Military Pay System. The Defense Joint Military Pay System processes pay for all active duty personnel; therefore, matching the pay accounts on the Defense Joint Military Pay System with the pay accounts on the Subsystem ensures that the retiree was previously on active duty and the account is valid. The DFAS Cleveland Center's management determined that this report did not need to be reviewed because the Military Department personnel offices must submit retirement documentation to the DFAS Cleveland Center before retiree accounts are established. However, this report can provide a control for detecting erroneous or potentially fraudulent pay accounts and should be reviewed. All reviews should be documented and stored on file.

Documentation Supporting Reviews of Reports. The DFAS Cleveland Center's management required supervisors to review transactions appearing on the "Death Notice Processing Report," the "Notice of Death Error Control Log," and the "Allotment Reconciliation Reject List." However, we were unable to test compliance with this requirement because supervisors did not retain or annotate the reports to indicate that any reviews were made.

- The "Death Notice Processing Report" listed rejections, discrepancies, and warnings that a notice of death may be incorrect. (The "Notice of Death Error Control Log" listed the rejections and discrepancies from the "Death Notice Processing Report.") Management required retired pay technicians to provide corrections of death notices to a reviewer who checked the corrections and annotated the "Notice of Death Error Control Log." We were unable to test the reviewers' compliance with management policy because management did not require that either of the reports be annotated or retained on file.
- The "Allotment Reconciliation Reject List" identified discrepancies between the Subsystem and the Allotment Master File. Pay technicians manually corrected the accounts and provided the changes to their supervisors. Management required the supervisors to review all allotment payments over \$5,000. We were unable to test compliance with this requirement because management does not require supervisors to annotate the reports. All reviews should be annotated in the reports to validate that the changes were made.

Adequacy of Standard Operating Procedures. Standard operating procedures were not always complete or up-to-date and did not provide assurance that data entered into the Subsystem were authorized and correct. As of June 1, 1998, the DFAS Cleveland Center had a total of 125 standard operating procedures for inputting and adjusting retired pay data in the Subsystem. We reviewed 18 processes described in 55 standard operating procedures that could have the most

significant impact on the reliability of information in the financial statements and the Subsystem. These 55 procedures provided guidance on retired pay processes such as the establishment of new retired pay accounts, the initiation of payments and vouchers, certifications of death, and the maintenance of existing accounts. The DFAS Cleveland Center did not have standard operating procedures for three additional processes that we considered significant in creating a retiree account.

Of the 18 processes reviewed, 7 (38.9 percent) lacked the necessary standard operating procedures or did not include all the standard operating procedures needed to properly process a transaction. Without adequate standard operating procedures, the retired pay employees could not ensure that data entered into the subsystem were correct. The seven processes reviewed were used to complete the following actions:

- reducing retirees' pay to fulfill child support or alimony obligations,
- authorizing past-due payments to beneficiaries of deceased retirees,
- transferring retirees from the temporary disability retired list to the permanent disability retired list,
- adjusting retirements after January 1, 1971, to the same pay as earlier retirements,
- computing retired pay based on the highest average military salary,
- processing name changes, and
- adjusting retirees' pay accounts based on recall to active military service.

In addition, the Quality Assurance Branch in the Retired Pay Directorate had also determined that standard operating procedures for the Subsystem were incomplete and had not been updated.

The DFAS Cleveland Center has made progress in updating standard operating procedures for the Subsystem. From April through August 1998, the DFAS Cleveland Center had updated one process and was in the process of updating another process. These two processes are part of the seven identified in this report that lacked the necessary procedures to record transactions correctly.

Continued emphasis on updating processes within the standard operating procedures will provide greater assurance that pay technicians have guidance that reflects current operations, including significant changes made to the Subsystem

Conclusion

DFAS Cleveland Center personnel did not always review error and rejection reports, which affected their ability to determine whether retiree accounts were accurate. In addition, managers at the DFAS Cleveland Center did not always ensure that standard operating procedures were developed for reviewing error and rejection reports and that existing procedures were enforced. Also, DFAS

Cleveland Center personnel needed to update standard operating procedures to ensure that retired pay employees understood their duties and entered only authorized information.

The absence of adequate application controls in the Subsystem increases the possibility that unauthorized or fraudulent activity may occur or may not be detected promptly to prevent misstatements in the financial statements of the Military Retirement Trust Fund. Also, the absence of these controls lowers managers' confidence in the authorization and the accuracy of retired payments.

Recommendations

We recommend that the Director, Defense Finance and Accounting Service, Cleveland Center:

1. Develop new review procedures and enforce existing review procedures for all critical reports generated by the Retiree and Casualty Pay Subsystem; document and maintain an audit trail of supervisory reviews of corrective actions by technicians.
2. Update standard operating procedures for the five processes identified in our review; create standard operating procedures for the three processes used in creating a retiree account; and review the remaining standard operating procedures and update them, if necessary, to reflect current operations for the Retiree and Casualty Pay Subsystem.

Management Comments Required

The Director, DFAS did not comment on a draft of this report. We request that DFAS provide comments on the final report.

Appendix A. Audit Process

Scope and Methodology

We reviewed application controls related to the Subsystem of the DRAS. Specifically, we:

- reviewed error and rejection reports,
- evaluated controls over the authorization of transactions,
- evaluated controls for the detection of input errors,
- reviewed written procedures for retired pay operations,
- evaluated controls for ensuring that information processed by the system was complete and accurate, and
- reviewed procedures for verifying the completeness of account updates.

We also reviewed policies and procedures for establishing and maintaining application controls. This guidance was provided in regulations, directives, circulars, or standards developed by OMB and DoD.

The Subsystem processed transactions for 1.8 million retirees and disbursed a monthly average of \$2.4 billion from the DoD Military Retirement Trust Fund in FY 1998.

DoD-wide Corporate-Level Government Performance and Results Act Goals. In response to the Government Performance and Results Act, DoD has established 6 DoD-wide corporate-level performance objectives and 14 goals for meeting these objectives. This report pertains to achievement of the following objective and goal.

- **Objective:** Fundamentally reengineer DoD and achieve a 21st century infrastructure. **Goal:** Reduce costs while maintaining required military capabilities across all DoD mission areas. **(DoD-6)**

DoD Functional Area Reform Goals. Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to the achievement of the following functional area objectives and goals.

- **Financial Management Functional Area. Objective:** Strengthen internal controls. **Goal:** Improve compliance with the Federal Managers' Financial Integrity Act. **(Financial Management-5.3)**
- **Information Technology Management Functional Area. Objective:** Provide services that satisfy customer information needs. **Goal:**

Improve information technology management tools. (**Information Technology Management-2.4**)

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the Defense Financial Management and the Information Management and Technology high-risk areas.

Use of Computer-Processed Data. We relied on computer-processed data from the Subsystem to determine the adequacy of the application controls used. Although we did not make a formal reliability assessment of the computer-processed data, the documentation obtained generally agreed with the computer-processed data. We did not find errors that would preclude the use of the computer-processed data to meet the audit objectives or that would change the conclusions in this report.

Review Period and Standards. We performed this financial-related audit from December 1997 through January 1999 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD. Further details are available on request.

Management Control Program

DoD Directive 5010.38, "Management Control Program," August 26, 1996, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of Management Control Program. The scope of review of the management control program included reviews of the adequacy of application controls over the Subsystem. We evaluated management controls over the authorization, completeness, accuracy, and integrity of processing and data files. Because we did not identify a material weakness other than the weakness disclosed in DFAS Cleveland Center's management control review, we did not assess management's self evaluation.

Adequacy of Management Controls. The DFAS Cleveland Center's application controls over the Subsystem could be improved. Specifically, improvements were needed in monitoring error and rejection reports and ensuring the adequacy of standard operating procedures. See Appendix C for information on the Vulnerability Analysis and Assessment Program.

The DFAS Cleveland Center conducted a management control review that identified a material weakness in reconciling the Subsystem with the Military Department personnel systems. No reconciliations have been made between the

Subsystem and the Army, Navy, or Air Force personnel systems to assist in the timely resolution of discrepancies and to identify potentially fraudulent or erroneous pay accounts.

The DFAS Cleveland Center has taken action to correct this weakness by submitting data on pay accounts to the Military Department personnel systems. The DFAS Cleveland Center will monitor and validate the reconciliation process.

The recommendations in this report, if implemented, will improve application controls over the Subsystem.

Appendix B. Summary of Prior Coverage

The following Inspector General, DoD, reports covered issues related to this audit.

Report No. 97-177, "Internal Controls and Compliance With Laws and Regulations for the DoD Military Retirement Trust Fund Financial Statements for FY 1996," June 25, 1997.

Report No. 97-052, "Vendor Payments - Operation Mongoose, Fort Belvoir Defense Accounting Office and Rome Operating Location," December 23, 1996.

Report No. 96-175, "Computer Security Over the Defense Joint Military Pay System," June 25, 1996.

Report No. 96-124, "Selected General Controls Over the Defense Business Management System," May 21, 1996.

Report No. 96-053, "Follow-up Audit of Controls Over Operating System and Security Software and Other General Controls for Computer Systems Supporting the Defense Finance and Accounting Service," January 3, 1996.

Report No. 95-263, "Controls Over Operating System and Security Software and Other General Controls for Computer Systems Supporting the Defense Finance and Accounting Service," June 29, 1995.

Report No. 94-060, "General Controls for Computer Systems at the Information Processing Centers of the Defense Information Services Organization," March 18, 1994.

Appendix C. Other Matters of Interest

Vulnerability Analysis and Assessment Program

General Accounting Office Report No. AIMD-96-84 (OSD Case No. 1150), "Information Security: Computer Attacks at Department of Defense Pose Increasing Risk," May 1996, states that based on information obtained from DISA, DoD may have experienced as many as 250,000 computer attacks in previous years. Of that number, approximately 65 percent may have been successful in penetrating DoD systems. Further, the number of attacks is likely to increase, as Internet use increases, along with the sophistication of hackers and their tools.

No specific DoD-wide policy exists that requires a vulnerability assessment or criteria for prioritizing the areas exposed to the highest risk of an attack. In 1992, DISA established a Vulnerability Analysis and Assessment Program to identify vulnerabilities in DoD information systems. The team that administers the Vulnerability Analysis and Assessment Program has the authority to test any system supported by the DISA network without first notifying personnel at the site. Testing of systems external to DISA is performed on request only.

During this audit, we reviewed the use of the Vulnerability Analysis and Assessment Program at the Defense Megacenters that process transactions for DRAS. DISA processed transactions for DRAS at its Defense Megacenters in Chambersburg, Pennsylvania, and Denver, Colorado. Transactions for the Annuitant Pay Subsystem were processed at the Defense Megacenter in Denver, Colorado.

Although DISA has tested 6 of the 16 Defense Megacenters for vulnerabilities, it has not begun the Vulnerability Analysis and Assessment Program at the Defense Megacenter in Denver. If people with wrongful intentions are able to exploit weaknesses at the Defense Megacenter in Denver, the Annuitant Pay Subsystem's operations could be disrupted, affecting the payments of over 257,000 annuitants. This could also materially affect the financial statements because the Annuitant Pay Subsystem disbursed a monthly average of \$144 million from the DoD Military Retirement Trust Fund in FY 1998.

DISA informed us that it plans to complete the Vulnerability Analysis and Assessment Program for all Defense Megacenters by May 2000. DISA must follow through as expeditiously as possible to prevent any potential security problems and to protect the integrity of DRAS.

Appendix D. Major Categories of Application Controls

We evaluated four major categories of application controls. Those categories included controls over the authorization, completeness, accuracy, and integrity of processing and data files.

Authorization Controls. These controls are closely associated with management's declaration on the financial statements (commonly called management's assertions) concerning the validity of transactions and the actual occurrence of transactions in a given period.

Completeness Controls. These controls directly relate to management's assertion on the completeness of transactions, or whether all valid transactions are recorded and properly classified.

Accuracy Controls. The accuracy controls are most directly related to management's assertion that transactions are recorded in the correct amounts. These controls are not limited to financial information, but also address the accuracy of other data.

Controls Over Integrity of Processing and Data Files. Integrity controls, if deficient, could nullify each of the above controls, allow the occurrence of unauthorized transactions, and contribute to incomplete and inaccurate data.

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